



APEGA Recommended Discipline Order

APEGA members and permit holders are required to practise engineering and geoscience skillfully, ethically, and professionally. They must meet all prescribed requirements and follow all applicable legislation and regulations, such as the [Engineering and Geoscience Professions Act, General Regulation, Code of Ethics, and APEGA bylaws](#). Investigation and enforcement—followed by, when necessary, judgment based on a fair hearing of the facts—are requirements of ours in service to the public interest. For more information, please visit www.apega.ca/enforcement/discipline-decisions.

Date: December 14, 2021

Discipline Case Number: 21-019

**IN THE MATTER OF A RECOMMENDED DISCIPLINE ORDER OF THE ASSOCIATION OF
PROFESSIONAL ENGINEERS AND GEOSCIENTISTS
OF ALBERTA**

Pursuant to the Engineering and Geoscience Professions Act,
being Chapter E-11 of the Revised Statutes of Alberta 2000
Regarding the Conduct of [AN APEGA REGISTRANT] AND [AN APEGA PERMIT HOLDER]

The Investigative Committee of the Association of Professional Engineers and Geoscientists of Alberta (APEGA) has investigated the conduct of a Registrant (the “Member”) and a permit holder (the Company) with respect to a complaint, initiated by [Name Withheld] (the Complainant).

A. THE COMPLAINT

The Complainant was employed by the Company from August 2017 until March 2019, at which time the Complainant resigned from the Company and filed the complaint alleging the Company and the Member engaged in unprofessional conduct and/ or unskilled practice, as defined at s. 44(1) of the Engineering and Geoscience Professions Act, RSA 2000, c E-11 (EGP Act) with respect to the approval of field inspections pertaining to fuel train enclosure systems for oil storage tank heaters situated throughout Alberta.

The Investigative Committee’s investigation focused on two main allegations, which can be summarized as follows:

1. With respect to Client A, the Company and the Member, or either of them, improperly issued field approvals for fuel-train enclosure equipment that was not in compliance with an area classification study and authenticated design issued to Client A by an engineering firm.
2. With respect to Client B, the Company and the Member, or either of them, improperly issued field approvals for gas-fired tank heaters being operated above the manufacturer’s specification.



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B. AGREED STATEMENT OF FACTS

(i) Background:

1. In Alberta, section 3 of the Gas Code Regulation, Alta Reg 111/2020 (a regulation under the Safety Codes Act, RSA 2000, c S-1) requires that all gas system equipment must be “tested and certified by a certification body accredited by the SCC, or inspected and accepted by a certification body or inspection body accredited by the SCC.”
2. The Company has been an APEGA Permit Holder since November 27, 2018.
3. The Member has been a professional member of Professional Engineers Ontario (PEO) since 1999. The Member became a professional member of APEGA on February 1, 2019. The Member has been employed by the Company since 2014.
4. The Complainant, a professional engineer registered with APEGA, was hired by the Company in August 2017 to review and approve field inspections carried out by a contractor, to ensure compliance with the Canadian Standards Association (CSA) B149.3 Gas Code. The field inspections pertained to fuel enclosure systems for oil storage tank heaters situated throughout Alberta. Prior to the Complainant being hired, this job function was performed by the Member.
5. When the Company became an APEGA Permit Holder in November 2018, until the Complainant resigned in March 2019, the Complainant was designated as the Company’s Responsible Member.
6. Among other things, APEGA requires that a Responsible Member hold a position of authority to ensure any practice occurring on behalf of the company meets APEGA’s ethical, professional, and technical standards.
7. The Member and the Company have fully cooperated with the APEGA investigation, and have taken steps to rectify the issues identified during the investigation.

(ii) Facts Relating to Allegation #1:

With respect to Client A, the Company and the Member, or either of them, improperly issued field approvals for fuel-train enclosure equipment that was not in compliance with an area classification study and authenticated design issued to Client A by an engineering firm.



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8. In late 2017, the Complainant noted that some of the fuel train enclosure equipment (enclosures) owned by Client A were not in compliance with an area classification study and authenticated design issued to Client A by a third party engineering firm. The area classification issued by the third party engineering firm established the authenticated design as falling within Class I, Zone 2 under the Canadian Electrical Code (CEC).
9. Enclosure installation in Alberta must satisfy two distinct criteria:
 - a. the installation must have an area classification determined and authenticated by an engineering professional licensed to practice in Alberta; and
 - b. the installation must be inspected for compliance with codes including CSA B149.3 by an accredited inspection body.
10. The purpose of area classification, as outlined in the CEC, is to determine the proper equipment, materials and wiring methods for electrical installations in hazardous locations.
11. Section 7.1.1(g) of CSA B149.3 requires that the owner be provided with specification of the hazardous area classification in compliance with the authority having jurisdiction.
12. Pursuant to section 19-100(2) of the Safety Codes Council's Code for Electrical Installations at Oil and Gas Facilities (4th Ed) 2013, which was in effect at the time, in the absence of an area classification established and documented by a professional engineer under the engineer's seal and signature, the area classification for the interior of the enclosures was Class I, Zone 1.
13. The authenticated design for Client A's enclosures, which classified the enclosures as Zone 2 (a less hazardous classification than Zone 1), included off-set ventilation holes. These were not tight-fitting enclosures that would be required to be explosion proof under CSA C22.2 No. 30. However, without the ventilation holes detailed in the design, the enclosures would be considered Zone 1 and be subject to more onerous electrical wiring requirements.
14. The photographs the contractor included in the inspection reports did not adequately show whether the enclosures had ventilation holes as specified in the authenticated design. As such, the Complainant requested that the contractor re-attend the sites to confirm the presence of the ventilation holes and to ensure the enclosures complied with the authenticated design.



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15. However, the contractor did not believe it was necessary to re-attend the sites. As a result, during 2018 and early 2019 the Complainant put 33 inspections reports on hold with respect to Client A's enclosures.
16. On multiple occasions in 2018 and 2019, the Complainant raised their concerns about the enclosures to the Member and to the Company.
17. Due to the Complainant's refusal to approve the enclosures without confirmation that the enclosures met the areas classification requirements set out in the authenticated design, the contractor contacted the Member directly for assistance.
18. Instead of notifying Client A the enclosures were not in conformance with the authenticated area classifications study and insisting Client A either provide an authenticated area classification for the design actually used by Client A or modify the enclosures to conform to the authenticated area classification study and design provided by the third party engineering firm, the Member made an internal proposal that the Company should conduct laboratory testing on a sample enclosure to validate the hazardous area classification of Client A's enclosures using the IEC 60079-10-1 standard. The IEC 60079-10-1 standard is not the applicable standard in Alberta for the determination of hazardous area classification.
19. Despite objections from the Complainant, who was the Company's Responsible Member, the Member made the decision to conduct testing in consultation with senior engineering staff (non-APEGA members) and the Company's chief technical officer, and arrived at the testing protocol with the support and assistance of senior technical representatives of the Company (non-APEGA members).
20. After the Complainant's departure, the Company made changes to its Professional Practice Management Plan to clarify the role and authority of the Responsible Member.
21. In January 2019, the Member provisionally approved inspection reports the Complainant had put on hold with respect to two of Client A's enclosures, pending the results of the laboratory testing.
22. In February 2019, the Member proceeded with laboratory testing of a sample enclosure. Subsequently, the Member subsequently approved the outstanding inspection reports with respect to Client A's enclosures on the basis that the hazardous area classification for the enclosures was Zone 2. At no point did the Member or anyone else involved in the evaluation process issue an authenticated design representing the as-built condition of the enclosures.



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23. The Member and the Company acknowledge the approach taken by the Member and the Company with respect to Client A's enclosures involved the practice of engineering.
24. Before the Investigative Committee completed its investigation and at the suggestion of the Investigation Panel, the Company reviewed all projects completed for Client A to date, and identified six enclosures that did not comply with the area classification study issued by the third party engineering firm and 19 enclosures that were potentially non-compliant. The Company informed Client A of the compliance issues and issued a non compliance letter to Client A.
25. As of July 15, 2020, the Company received confirmation from Client A that all 25 enclosures had been modified, of which 12 were verified by the Company's field evaluation staff. The Company issued amended reports to Client A, and confirmed to the Investigative Committee it had done so.
26. The Member and the Company acknowledge and admit that when it was determined Company A's enclosures did not conform to the third-party engineering firm's authenticated area classification study, the proper approach was to notify Client A the enclosures were not in conformance with the authenticated area classification study, and insist the Client either:
 - a. provide an authenticated area classification for the design actually used by Client A; or
 - b. modify the enclosures to conform to the authenticated area classification study and design provided by the third-party engineering firm.
27. The Member and the Company acknowledge they failed to take either of these steps until it was suggested to them during the investigation.

(iii) Facts Relating to Allegation #2:

With respect to Client B, the Company and the Member, or either of them, improperly issued field approvals for gas-fired tank heaters being operated above the manufacturer's specification.

28. In November 2018, the Complainant began reviewing field inspection reports submitted by the contractor regarding gas burner appliances owned by Client B.
29. Client B was operating the gas burner appliances at a higher firing rate (1.5 MBTUH) than the BTU limit specified by the manufacturer (0.75 MBTUH), which was recorded on the drawings, and had added a fan and motor to the appliances to operate at the



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higher BTU firing rate with a stable flame.

30. Based on the Complainant's review, the Complainant determined the gas-fired tank heaters were not in compliance with CSA B149.3, and therefore placed his approval of Client B's gas burner appliances on hold.
31. Meanwhile, the Member engaged in discussions with the contractor and with Client B about providing an alternative solution involving a technical variance, and concluded that was an appropriate course of action.
32. Testing was conducted on the gas burner appliances. Based on the Member's review of the testing report, the Member concluded the design change introduced by Client B, which included the use of fan assisted blowers and a manual shut-off valve, was safe and met the intent of CSA B149.3. As such, on April 3, 2019, the Member approved four inspection reports pertaining to Client B's gas burner appliances, on the basis of a documented Valid Technical Reason for permitting a variation to CSA B149.3, which was set out in the reports.
33. The Member and the Company acknowledge that the approach taken by the Member and the Company with respect to Client B's gas burner appliances involved the practice of engineering.
34. Section 4.2.1 of CSA B149.3 requires that an "appliance, accessory, component, equipment, or material used in an installation shall be of a type and rating approved for the specific purpose for which it is employed."
35. At the time the Member approved the inspection reports for Client B's gas burner appliances, the Member and the Company were aware that Client B was operating the gas burner appliances at approximately 200% capacity.
36. The Member and the Company acknowledge and admit that they failed to ask for an authenticated engineering design that confirmed the gas burner appliances were suitable for firing continuously in an over-fire condition. In the absence of an authenticated engineering design that supported the higher firing rate for these appliances, a non-conformance should have been issued.
37. The Member and the Company acknowledge that when it became apparent the gas burner appliances had been modified on behalf of Client B, an appropriate approach would have been to notify Client B that an authenticated engineering design was required to support the modified design, or a non-conformance would be issued.



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38. In January 2020, while the investigation of the Complaint was ongoing, the Investigative Committee informed the Company of its safety concerns with respect to the gas burner appliances, noting there appeared to be active gas burner appliances being used in the field that were being operated in an over-fire condition.
39. Between January and April 2020, the Company undertook an internal review regarding the over-firing of gas burner appliances approved by the Member. As a result of its review and having regard for the Investigation Panel's concerns, the Company advised Client B to reduce the BTU input to ensure compliance. The Company subsequently undertook field inspections to verify that Client B's gas burner appliances were being operated at their design rate, and confirmed to the Investigative Committee it had done so.

C. CONDUCT BY THE MEMBER

40. The Member acknowledges that their conduct as described in Section B of this Recommended Order amounts to unskilled practice of the profession as defined in section 44(1)(d) of the Act:

Section 44(1) Any conduct of a professional member, licensee, permit holder, certificate holder or member-in-training that in the opinion of the Discipline committee or the Appeal Board,

...

d) displays a lack of knowledge of or lack of skill or judgement in the practice of the profession

...

whether or not that conduct is disgraceful or dishonorable, constitutes either unskilled practice of the profession or unprofessional conduct, whichever the Discipline Committee or the Appeal Board finds.

41. With respect to Allegation #1, the Member acknowledges that by failing to take the actions set out in paragraph 26, above, the Member displayed a lack of knowledge and a lack of judgment in the practice of the profession.
42. The Member also acknowledges and admits they failed to show an appropriate understanding of the role of a Responsible Member. This displayed a lack of knowledge in the practice of the profession.



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43. With respect to Allegation #2, the Member acknowledges that by failing to take the actions referenced in paragraphs 36 and 37, above, the Member displayed a lack of judgment in the practice of the profession.

D. CONDUCT BY THE COMPANY

44. The Company acknowledges that its conduct as described in Section B of this Recommended Order amounts to unskilled practice of the profession as defined in section 44(1)(d) of the Act:

Section 44(1) Any conduct of a professional member, licensee, permit holder, certificate holder or member-in-training that in the opinion of the Discipline committee or the Appeal Board,

...

- d) *displays a lack of knowledge of or lack of skill or judgement in the practice of the profession*

...

whether or not that conduct is disgraceful or dishonorable, constitutes either unskilled practice of the profession or unprofessional conduct, whichever the Discipline Committee or the Appeal Board finds.

45. With respect to Allegation #1, the Company acknowledges that by failing to take the actions set out in paragraph 26, above, the Company displayed a lack of judgement in the practice of the profession.
46. The Company also acknowledges that it failed to ensure its Responsible Member held a position of authority to ensure any practice occurring on behalf of the company met APEGA's ethical, professional, and technical standards. This displayed a lack of knowledge in the practice of the profession.
47. With respect to Allegation #2, the Company acknowledges and admits that by failing to take the actions referenced in paragraphs 36 and 37, above, the Company displayed a lack of judgement in the practice of the profession.

E. RECOMMENDED ORDERS WITH RESPECT TO THE MEMBER

48. On the recommendation of the Investigative Committee, and by agreement of the Member with that recommendation, and following a discussion and review with the



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Discipline Committee Case Manager, the Discipline Committee hereby orders that:

- a. The Member will receive a letter of reprimand, a copy of which will be maintained in the Member's APEGA registration file and may be considered by APEGA, subject to paragraph (b), below.
- b. If the Member is not subject to any disciplinary proceedings that result in a finding of unprofessional conduct or unskilled practice for a period of three years following the date on which this RDO is approved, then the reprimand will be removed from the Member's APEGA registration file. For clarity, if a complaint is received or disciplinary proceedings are otherwise commenced within the three-year period and are not yet concluded at the end of the three year period, then the reprimand shall be kept on file pending the outcome of the disciplinary proceedings, and may be considered in the event of a finding of unskilled practice or unprofessional practice
- c. The Member shall provide written confirmation to the Director of Enforcement within thirty days of being notified that the RDO has been approved, that the Member has reviewed the following APEGA publications and that the Member will comply with the requirements therein:
 - Guideline for Ethical Practice (v2.2, February 2013);
 - Practice Standard for Concepts of Professionalism (September 2004);
 - Practice Standard for Authenticating Professional Work Products (July 2019); and
 - Guideline for Management of Risk in Professional Practice (September 2006).
- d. The Member must take the APEGA Permit to Practice seminar in person or online within one year of this RDO being approved;
- e. The Member must take and pass the National Professional Practice Exam within one year of this RDO being approved;
- f. The Member shall pay a fine of \$2,500.00 within one year of this RDO being approved;
- g. The Member will be considered to be a Member in good standing while completing the above noted sanctions;



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- h. This matter and its outcome will be published by APEGA as deemed appropriate and such publication will not name the Member.

F. RECOMMENDED ORDERS WITH RESPECT TO THE COMPANY

49. On the recommendation of the Investigative Committee, and by agreement of the Permit Holder with that recommendation, and following a discussion and review with the Discipline Committee Case Manager, the Discipline Committee hereby orders that:
 - a. The Company will receive a letter of reprimand, a copy of which will be maintained in the Company's APEGA registration file and may be considered by APEGA, subject to paragraph (b), below.
 - b. If the Company is not subject to any disciplinary proceedings that result in a finding of unprofessional conduct or unskilled practice for a period of three years following the date on which this RDO is approved, then the reprimand will be removed from the Company's APEGA registration file. For clarity, if a complaint is received or disciplinary proceedings are otherwise commenced within the three-year period and are not yet concluded at the end of the three year period, then the reprimand shall be kept on file pending the outcome of the disciplinary proceedings, and may be considered in the event of a finding of unskilled practice or unprofessional practice
 - c. The Company shall develop a set of training materials detailing the correct compliance procedures for instrument enclosures, similar to those described in the RDO, for review and approval by the Director of Enforcement within sixty (60) days of this RDO being approved. The Director of Enforcement may request that the compliance procedures be reviewed and approved by an independent third party at a cost borne by the Company;
 - d. The General Manager of the Company shall take the APEGA Permit to Practice seminar in person or online within one year of this RDO being approved;
 - e. The Company's Accreditations Manager for Canada shall provide written confirmation to the Director of Enforcement within thirty (30) days of being notified that the RDO has been approved, that he/she has reviewed the following APEGA publications in consultation with the appointed Responsible Member, and that ULC will comply with the requirements therein:
 - Guideline for Ethical Practice (v2.2, February 2013);
 - Practice Standard for Concepts of Professionalism (September 2004);



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- Practice Standard for Authenticating Professional Work Products (July 2019); and
 - Guideline for Management of Risk in Professional Practice (September 2006).
- f. The Company shall be considered to be a Permit Holder in good standing while completing the above noted sanctions;
- g. This matter and its outcome will be published by APEGA as deemed appropriate and such publication will not name the Company.

IN WITNESS WHEREOF the undersigned agrees with the Agreed Statement of Facts and Acknowledgement of Unskilled Practice in its entirety.

Signed,

[PERMIT HOLDER]

[PROFESSIONAL MEMBER], P.Eng.

MR. GEORGE CARAGANIS, P.Eng.
Panel Chair, APEGA Investigative Committee

MR. TOM GREENWOOD-MADSEN, P.Eng.
Case Manager, APEGA Discipline Committee

Date: December 14, 2021